some could be done by the DSPs in the MediaStar's own cards. It is also necessary to remove or at least recognise, periods of music, on-hold periods, IVR rather than real agents speaking etc. thus, bundling with Computer Integrated Telephony Services such as Telephony Services API (TSAPI) in many cases is appropriate.

Analysis and parameter identification as described above can then be conducted. However, as noted, if it is not possible to analyse all speech initially, analysis of a recorded signal can be conducted.

In any case the monitoring apparatus may be arranged to only search initially for a few keywords although re-play can be conducted so as to look for other keywords.

It should be appreciated that the invention is not restricted to the details of the foregoing embodiment. For example, any appropriate form of telecommunications network, or signal transmission media, can be monitored by apparatus according to this invention and the particular parameters identified can be selected, and varied, as required.

1. A signal monitoring system for monitoring and analyzing communications passing through a monitoring point, the system comprising:

a digital voice recorder (18) for monitoring two-way conversation traffic streams passing through the monitoring point, said digital voice recorder having connections (20) for being operatively attached to the monitoring point;

a digital processor (30) connected to said digital voice recorder for identifying at least one predetermined parameter by analyzing the voice communication content of at least one monitored signal taken from the traffic streams;

a recorder (38) attached to said digital processor for recording occurrences of the predetermined parameter;

a traffic stream identifier (36) for identifying the traffic stream associated with the predetermined parameter;

a data analyzer (36) connected to said digital processor for analyzing the recorded data relating to the occurrences; and

a communication traffic controller (34) operatively connected to said data analyzer and, operating responsive to the analysis of the recorded data, for controlling the handling of communications traffic within said monitoring system.--

2. The monitoring system of claim 1, wherein said at least one predetermined parameter includes a frequency of keywords identified in the voice communication content of the at least one monitored signal.--

3. The monitoring system of claim 1, wherein said digital processor further identifies episodes of anger or shouting by analyzing amplitude envelope.

4. The monitoring system of claim 1, wherein said at least one predetermined parameter is a prosody of the voice communication content of the at least one monitored signal.

5. The monitoring system of claim 1, wherein said connections for being operatively attached to the telephony exchange switch are attached via high impedance taps (20) to telephone signal lines (24, 26) attached to said telephony exchange switch.

6. The monitoring system of claim 1, wherein said communication traffic controller serves to identify at least one section of traffic relative to another so as to identify a source of the predetermined parameter.

7. The monitoring system of claim 1, wherein said communication traffic controller serves to influence further monitoring actions within the apparatus.

8. The monitoring system of claim 1, wherein the analyzed contents of the at least one monitored signal comprise the interaction between at least two signals representing an at least two-way conversation.

9. The monitoring system of claim 1, wherein the recorder operates in real time to provide a real-time indication of the occurrence.

10. The monitoring system of claim 1, wherein said digital voice recorder comprises an analog/digital convertor (18) for converting analog voice into a digital signal.

11. The monitoring system of claim 1, wherein said digital processor is a Digital Signal Processor (30) arranged to operate in accordance with an analyzing algorithm.

12. The monitoring system of claim 1, wherein the digital processor is arranged to operate in real time.

13. The monitoring system of claim 1, further comprising a replay station (32) connected to said digital processor and arranged such that the voice communication content of the at least one monitored signal can be recorded and monitored by said digital processor for identifying the at least one parameter at some later time.

14. The monitoring system of claim 1, wherein the at least one predetermined parameter comprises plural predetermined parameters and wherein said recorder records the occurrence of the plural predetermined parameters in each of the two directions of traffic separately.

15. The monitoring system of claim 1, wherein said traffic stream identifier comprises a means for receiving an identifier tagged onto the traffic so as to identify its source.

16. The monitoring system of claim 1, wherein said digital voice recorder for monitoring the traffic streams is operative responsive to an output from said traffic stream identifier identifying the source of the conversation in which the predetermined parameter has been identified, or a threshold occurrence of the predetermined parameter has been exceeded.

17. The monitoring system of claim 1, wherein said digital voice recorder, said digital processor, said recorder, said traffic stream identifier, and said data analyzer reside on an add-in card to a telecommunications system.